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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

GPO 123668

APR 1 3 1940

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REPORT FOR THE PERIOD APRIL 1-13, 1940.

HAVRE: (Week ending April 6)

Unsettled weather and cloudy skies prevailed most of the week, with freezing temperatures practically every night. No field work was possible owing to the ground being too wet.

Old stands of crested wheatgrass have made around 3 inches of growth, and fall plantings are emerging in excellent shape. Native prairie grass is just starting growth.

Calving is now in progress, with 15 calves having been dropped so far. Wet weather has necessitated much additional care, but as yet there have been no losses. Four Hereford bulls were trucked from the Montana Experiment Station at Bozeman and are to be kept at this Station until the breeding season commences.

Visitors included Clyde McKee, Director of the Montana Experiment Station; H. B. Mills of the Entomology Department, Montana State College, and Kelvin Doward in charge of the Federal grasshopper control in this area; and Earle A. Cole of Soil Conservation Service.

Maximum temperature, 58°; minimum, 22°; precipitation, 0.56 inch; snowfall, 0.5 inch.

HAVRE: (Week ending April 13)

The fore part of the week was unseasonably cold being accompanied by cloudy skies and unsettled weather, however sunshine and warmer temperatures prevailed during the latter part. Rain began falling Monday night, turning into snow which continued through Tuesday. The temperature dropped to -9° Tuesday night, which is a station cold record for this late in April. The ground froze to a depth of several inches.

Top soil moisture for spring planting is as favorable as it has been in many years. Owing to cold weather, vegetation showed very little growth. Practically no field work has been done in this area as yet.

Owing to cold, wet weather, it has been necessary to give considerable care to the calving herd, however, only one calf has been lost so far. Forty-two calves have been dropped to date, including two pairs of twins.

Visitors included R. T. Ferguson, Fred Kennedy, L. H. McLain and Mr. Echert of the Forest Service, who inspected grass plantings at the station. Torlief Aasheim of Soil Conservation Service also conferred at the station regarding cooperative projects.

Maximum temperature, 43°; minimum, -9°; precipitation, 0.28 inch; snowfall, 2.1 inches.

JUDITH BASIN: (Week ending April 6)

This period was comparatively cold with minimums below freezing each night.

Precipitation during the period totaled 0.28 inch.

There were higher wind velocities during the past six days than for several weeks, and snow moved off rapidly.

No field work was possible.

Maximum temperature, 45°; minimum, 24°; precipitation, 0.28 inch.

JUDITH BASIN: (Week ending April 13)

Winter paid a return visit during the past week when -18° was recorded on the morning of the 11th. The severe freeze may have injured some of the winter wheat in this area, however, it is a bit early to determine the extent of damage, if any. We received from three to four inches of snow which recorded 0.14 inch of precipitation and fortunately protected the fall-sown crops.

The cattle in the winter feeding and pasture experiment came off test on Wednesday and were placed on a grain feed prior to sale. The marked difference in condition between the pasture and feed lot groups strongly favored the latter group.

The only field work has been to rake and burn thistles.

Maximum temperature, 63°; minimum, -18°; precipitation, 0.17 inch.

SHERIDAN: (Week ending April 6)

Temperatures ranged from quite high over the first couple days of the week to rather low over the last few days - about average for the week as a whole. A light fall of rain and wet snow on the 2nd stopped field work for the week except for some work on light soil on the 5th. Moisture from drifted snow in spots over the rotation field prevented any work in that field, except to complete staking for seeding.

Maximum temperature, 68°; minimum, 25°; precipitation, 0.34 inch.

SHERIDAN: (Week ending April 13)

Two showers and a light snow storm, together with cloudy weather over the first 6 days of the week, and unseasonably cold weather on 2 days, prevented much of any field work. Wheat, barley, and field peas were sown in the rotations between showers, together with corresponding dates of seeding of wheat and barley. Only miscellaneous work, consisting in part of repairing corral fences, and removing some of the drifted soil from fence lines to make a road grade across one of the ravines nearby, was accomplished over the remainder of the week.

Maximum temperature, 61°; minimum, 4°; precipitation, 1.01 inch.

DICKINSON: (April 1-13)

Cold weather from the 1st to the 12th with snow and rain held back field work. Minimum temperatures of 6° on the 5th and 8° on the 11th, with freezing every night, have kept the surface soil frozen.

Higher temperatures yesterday and today have permitted field work to start. Disking of fall-plowed plots was started today. These plots still contain a few hard, dry clods but they work down better than in some recent springs. On grain stubble the soil is wet 8-10 inches or deeper, but on sod only about 6 inches is wet.

Winter wheat and rye stands are thin and have made little growth. It is probable that the winter wheat plots will be reseeded to spring wheat. Grass has made very little growth and will be late in providing pasturage.

Seed grains have been treated ready for seeding. Some pruning of plums and crabs was done. If weather permits, the rotation plots can be seeded next week, which will be about a week later than average.

Maximum temperature, 62°; minimum, 6°; precipitation, 0.57 inch.

MANDAN: (April 1-13)

ARBORICULTURE: Field work commenced on April 8, the latest time of the past several years. Chinese elm stock has been dug and graded. Rabbits had cut the tops of many of these. Land has been worked down for seeding tree seed. Caragana seed has been planted, and the sowing of Russian olive seed is in progress today. Soil conditions are ideal for planting with plenty of moisture in the surface layer. Several small lots of coniferous and deciduous stock which were shipped in have been planted for test purposes. Part of these lots shipped in from New Mexico and Oklahoma were planted shortly before the severe cold wave of the middle of the week and are likely to be badly damaged. Winter burning of evergreens has been extremely severe both in nursery stock and larger trees. All needles are killed on the south sides. The effect of leaves which had blown into some of the nursery beds in preventing this burning is quite noticeable. The bottom line of "burning" coincides very sharply with the top of the leaf mulch.

HORTICULTURE: Cold weather and light snows during the past few weeks have delayed the starting of field work. However, the frost is now out of the ground and planting should start next week. Little winter injury to fruit trees is evident as yet, but a dry spring could still cause extensive killing from drought. Fair to good sets of fruit have been obtained in the greenhouse from hand crossing work. Most of this work was with Prunus species rather than apples this year.

Plants for vegetable projects in the field were started in the greenhouse March 15 and are nicely under way. Cannas were started the latter part of March, and an adequate supply for the seasons bedding display is on hand. There are as yet few signs of growth on lawns and among trees and shrubbery. Owing to a mild winter, there seems little or no winter injury among shrubs. No planting of vegetables in the field has yet been done, but there seems to be an adequate supply of moisture in the top soil for a good germination when the first plantings are usually made on or about April 16.

AGRONOMY: April opened with freezing or near freezing temperatures. Five inches of snow fell during the 2nd and 3rd. The only field work so far has been cleaning up and burning old weeds. A layer of 2 to 3 inches of the soil was frozen on the 12th.

New growth is just starting on crested wheatgrass. Native vegetation has made practically no growth to date.

Surface soil is in better condition for seedbed preparation than it was in 1939.

So far there has been more wind in March and April than for the same period in 1939.

Maximum temperature, 29° to 53°; minimum, 9° to 34°; precipitation, 0.71 inch.

BELLE FOURCHE: (April 1-13)

The weather was mostly cold, cloudy, and unsettled, with unseasonably low temperatures of 9° and 6° on April 10 and 11. The last day of the period, however, was clear and unusually warm. Precipitation was received on 6 days, but with the exception of 0.30 inch recorded on April 1 and 2, the amounts were only sufficient to retard the drying of the soil. A high southeast wind on April 5 caused considerable soil blowing almost before the surface of the ground was dry. A very high northwest

wind occurred on April 3, but the soil fortunately was wet from the rain and snow received April 1 and 2.

Plant growth was retarded by the cold, cloudy weather, and crops made little progress. Stands of winter grain continued to improve slowly, but grass and other crops remained almost stationary. Moisture has penetrated the soil to a depth of 7 to 9 inches, generally, but there are occasional small areas which are wet to a depth of only 5 inches.

Some corrugating to check soil blowing, spring tooth harrowing, and reseeding of alfalfa, sweetclover, and grass was done on April 5 and 6, but the soil did not dry sufficiently to permit plowing and general field work until April 9. Field operations were interrupted for two days by a light snow, but the hard freeze on April 10 and 11 reduced spring-plowed soil to a friable condition, enabling spring plowed land to be worked down into a satisfactory seed bed. Spring plowing of plots was completed, all plowed land was disked, and cultivated plots are being duckfooted.

Maximum temperature, 74°; minimum, 6°; precipitation, 0.54 inch.

ARCHER: (April 1-13)

Except during the first day of April the weather was rather cold and blustery with snow flurries and some rain. These conditions hampered field work and retarded plant growth.

The condition of winter wheat is not such as to give much promise. At the station that seeded on the better methods of fallow is showing green in the drill rows, but that seeded on stubble land and the poorer methods of fallow has been duckfooted in preparation for reseeding to spring wheat. In the Nunn district of Colorado and also in eastern Wyoming and western Nebraska very few fields of winter wheat are in good condition and in many fields the crop is in poor shape.

The low temperatures during the past week frosted the upper leaves of the crested wheatgrass. Native grasses being shorter appear unharmed.

Station operations consisted of staking plots, cleaning yards, and seeding. Twenty acres in the dairy field were seeded to spring wheat for hay, and two days' seeding was accomplished in the rotation plots. The seedings consisted of wheat, peas, grass, alfalfa, and clover.

Director W. L. Quayle of the University of Wyoming and A. D. Ellison and Wayne Austin of the Soil Conservation Service were station visitors.

Maximum temperature, 70°; minimum, 6°; precipitation, 0.75 inch.

NORTH PLATTE: (Week ending April 6)

Fair and cool weather prevailed throughout most of the week. High winds on Tuesday and Wednesday caused considerable soil blowing from unprotected fields. There have been very few days this spring with wind strong enough to cause much soil blowing. No precipitation was recorded during the week.

The spring wheat is up, and the oats and barley are emerging. During the week, several stubble plots for corn and fallow were rod weeded to remove the volunteer grain.

Dr. K. S. Quisenberry visited the station to take notes on the winter wheat nursery and field plots. He reported that there is very little winter wheat in the south central counties of the State. The writer accompanied him through several counties in western Nebraska and

found that wheat in the southwestern counties is looking good and some fields have made a growth of 6 inches. Moisture was found in most fallow fields from two to three feet. In Kimball county, there is less growth and less soil moisture but stands are good. In Cheyenne and Deuel counties there are good stands on nearly all fallow fields, and there is enough growth to completely cover the ground. It may be said that in the southwestern and southern counties of the panhandle prospects for a crop are good, but there must be at least a normal amount of spring moisture to assure a crop.

Soil sampling was started this week. Very little available moisture was found below 6 inches on cropped land; on fallow, moisture extends down to about 3 feet.

Maximum temperature, 82°; minimum, 23°; precipitation, 0.

NORTH PLATTE: (Week ending April 13)

A small amount of precipitation fell early in the week and on Wednesday. Fair and warm weather prevailed the first four days of the week, but on Thursday and Friday temperatures fell below the freezing mark. Oats and barley which were just emerging were frozen and also the top growth of winter wheat. Temperatures moderated on Saturday.

Potatoes were planted during the week, and weeds were raked and burned on the dry land station.

The station was host to 350 Smith-Hughes boys and their coaches from western Nebraska schools on Thursday and Friday. The boys participated in the annual Smith-Hughes contest conducted by the station.

Maximum temperature, 73°; minimum, 13°; precipitation, 0.15 inch.

COLBY: (Week ending April 6)

The fore part of the week was warm and favorable for crop growth, but the last two days were cold. A high southwest wind on the afternoon of the 1st filled the air with dust and caused some soil blowing. On the evening of the 2nd a violent dust storm came up from the northwest, and for about half an hour visibility was reduced to about 100 feet. Some branches were broken off trees. The only precipitation was a few sprinkles Wednesday night.

Winter wheat which did not come up last fall is up to partial stands. Some that came up last fall died. Over an area northeast of here, several miles wide and about 50 miles long, most of the wheat got well established last fall and is looking very promising at this time. Isolated fields here and there in other parts of this county where the local showers were heavier last fall, also look promising.

The spring small grains on the plots are beginning to emerge. The cold weather now prevailing is delaying complete emergence. Thistles are coming up thick on most fields but are not making much growth. In exposed places some of the young, tender plants have been nipped by frost. The surface soil is crusted and cracked. Soil samples show practically no moisture below the second foot.

Maximum temperature, 90°; minimum, 26°; precipitation, trace.

COLBY: (Week ending April 13)

This week was rainy, snowy, and cold. Precipitation was recorded every day except two, but the total was only 0.24 inch. The precipitation started with rain each time but ended in snow. The temperature dropped below freezing every night, but two. Friday morning the minimum was 9°, and the ice on the evaporation tank was over an inch thick. The temper-

ature rose rapidly to 57° in the afternoon.

The spring small grains came up the fore part of the week. Friday morning they froze back considerably in spite of the fact that the drill ridges were filled with snow. The winter wheat was frozen back also, especially where the growth was rank. Thistles were killed only in spots. Apricot trees blossomed two days before the hard freeze.

About 100 4H club members from this section of the State took part in a judging contest at the station yesterday. Today about 300 vocational agriculture boys were at the station for the vocational agriculture judging contest. These contests are held annually in connection with similar contests held at the Foster Farms about 20 miles northeast of here where they have an outstanding herd of Herefords and some good Clydesdale horses.

Maximum temperature, 71°; minimum, 9° precipitation, 0.24 inch; snowfall, 1.5 inches.

GARDEN CITY: (April 1-13)

Precipitation for this period amounted to 0.42 inch and came in the form of snow and rain. This was of some benefit to the spring small grains which are up, however, the temperature dropped to 14° on the night of the 11th and froze the leaves. The extent of the damage remains to be seen. The maximum temperature on April 1 was 91°, which is the highest on record for that date. Dust occurred on two days, but it was not severe.

Field work consisted of plowing and listing the plots as scheduled. Soil moisture samples were taken on some of the plots seeded to barley.

F. G. Ackerman, Soil Conservation Service, Iola, Kans., was a Station visitor.

Maximum temperature, 91°; minimum, 14°; precipitation, 0.42 inch.

TUCUMCARI: (Week ending April 6)

April to date has been consistently erratic. Temperatures have ranged from 30° to 85°; wind movement, 24-hour averages, from 2.9 to 16.7 miles per hour; and daily evaporation from 0.002 to 0.464 inches.

The first precipitation in about a month occurred yesterday when 0.61 inch was received in the form of wet snow which melted nearly as fast as it fell. This will be of great value to local ranges and row crop fields as well as to wheat fields to the south. Prior to the snow, several days of very high wind movement occurred.

No fruit has been injured to date with the exception of a few peaches which were killed by a severe freeze Easter.

Blank listing of station increase land and some plot fields will be begun the coming week.

TUCUMCARI: (Week ending April 13)

The week was without precipitation and varied greatly in temperature extremes. A maximum reading of 80° on the 10th was followed two days later by a minimum of 23°. All fruit with the exception of late blooming apples and cherries and grapes was killed.

The grasshopper eradication work is expected to start in some two weeks in this county. The acreage covered by beds is perhaps only some 10 percent of the area infested a year ago. New Mexico's infestation is confined to three counties, so far as can be determined, and the area in those counties is much smaller than a year ago.

Station work of the week included blank listing of plot and increase fields, picking and planting of Chinese elm seed just before the severe freeze, stalk cutting, and general station clean-up.

BIG SPRING: (April 1-13)

After several days of warm weather the temperature took a sudden dip below freezing on the night of April 11 when a low of 29° was recorded. The temperature remained below freezing only for a short time, so no damage occurred even to the more tender plants. The fruit crop in this vicinity is also saved from the spring freezes so far.

Two showers totaling 0.55 inch were received April 4 and 5. This precipitation will start weeds and grass to growing in the pastures, and has also started many farmers to planting Sudan grass and early feed stuffs.

Station work has consisted of plowing under wheat in the orchard and vineyard, plowing spring plowed plots, and threshing milo for the feeding experiments. Spring plowing was started before the rains, but the soil was so dry that a poor job was accomplished. Since the rain the soil has been turning over in excellent shape.

Maximum temperature, 95°; minimum, 29°; precipitation, 0.55 inch.

WOODWARD: (April 1-13)

Variable weather has characterized the month thus far. Unseasonable warmth and continued drouth with occasional strong winds prevailed until the 5th, followed by an unsettled period in which 1.40 inches of precipitation was recorded. On the evening of April 9 there was a heavy downpour of rain and small hail. A severe freeze occurred during the night of the 11th, the minimum temperature being 22°.

Winter wheat where stands are fair should benefit from the recent rain, although the condition of the crop still remains far below normal. There was no apparent injury to small grains and flax from the frost.

Tomatoes planted April 2 were all frozen even where protected by hotcnts. Indications are that all peaches and apricots, most of the plums, and part of the cherries and apples have been killed.

Shipping trees and shrubs to cooperators was completed. Lining out seedlings and transplants in nursery rows is now in progress. Roadside plantings of evergreens and shrubs have been made along the north property line. Many flowering plants were badly damaged by the hail and frost, however, red buds (Cercis canadensis) completed the showiest bloom in recent years.

Grass was seeded in the sod rotations, and miscellaneous alfalfa plantings were made. All areas were again cultivated to prevent blowing following the rains. Road work on the S.C.S. farm has been completed and some increase fields sown.

Maximum temperature, 87°; minimum, 22°; precipitation 1.40 inches.

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REPORT FOR THE WEEK ENDING APRIL 20, 1940.

HAVRE:

Mean temperatures averaged 4.2° higher than the average. Wind movement recorded on the 2-foot anemometer was 13.3 miles per hour on Wednesday, some soil blowing being observed. Some days had considerable sunshine, and others were cloudy.

Field work continued without interruption until Saturday morning, when rain began falling. The first date of seeding small grain was made on Monday, the ground being in excellent condition. Spring plowing in the experimental field was completed. Tillage operations on fall-plowed projects are in progress. Weed burning on certain plots has been accomplished. Winter rye survived in excellent condition. Winter wheat also seems to be coming through in good shape.

Alfalfa fields are receiving a first irrigation, growth being retarded by cold weather. Weeds were raked and burned from the edges and on the strips of the contour field, and on the dry land registered Ladak alfalfa field. A 10-acre tract was plowed in field C, that is to be planted to a new wilt resistant alfalfa. Weeds were also raked and burned from two of the older alfalfa fields in preparation for plowing up. These were originally seeded with Common alfalfa and the stand had become thin in spots, and it is also desired to establish stands of Ladak. We have a good reserve of alfalfa hay at this time, hence this was considered a good time to try to establish better stands on these fields.

Some work was begun on ground beautification, a few trees and shrubs were moved, and some Russian olive planted. The ground in front of the apartment dwelling and duplex was also spaded where no lawn has been established. The horticultural work is being accomplished with W.P.A. labor.

About 50 F.F.A. boys and their instructors representing the chapters at Joplin, Chester, Hingham, Highwood, and Big Sandy visited the experimental lots Friday. Four classes of cattle and one class of draft horses were judged during the day.

Visitors included William Jones, Torlief Aasheim, Earle A. Cole, and Herbert Erickson, all of Soil Conservation Service, who conferred regarding cooperative projects. Messrs. Cole and Erickson will do some surveying on the contour field.

Maximum temperature, 76°; minimum, 24°; precipitation, trace.

JUDITH BASIN:

Favorable weather during most of the week allowed field activities to begin in this immediate area. Temperatures were higher, with maximums of 62° or more on all but two days during the period.

Considerable wheat stubble, surrounding the station, was burned during the latter part of the week. Many operators anxious to begin field work found the soil too wet to work.

The 36 steers for the summer grazing trials arrived at the station on the 18th from the Hughes Livestock Company of Stanford. They were vaccinated and branded and are ready to be weighed and grouped. The reserve or extra crested wheatgrass pasture is being divided into two parts and will be grazed in rotation, this season, in addition to the

other regular pastures of native grass, bromegrass, and crested wheatgrass.

Damage from the severe freeze on the 11th, when the temperature was -18°, has become evident in some of the winter wheat plantings. Many of the conifers have turned brown, but it is still difficult to estimate the exact amount of damage to the various species. The north and west sides of a number of crested wheatgrass plants were frozen to the crown.

Dr. R. T. Clark, head of the Animal Husbandry Department of the Montana State College spent the 17th and 18th at the station regarding cooperative work being conducted here.

Maximum temperature, 75°; minimum, 25°; precipitation, 0.29 inch.

HUNTLEY: (Period April 1-20)

Because of wet soil and stormy weather little field work was possible until the 18th. Showers and wet snows to date have brought the precipitation for April to 1.69 inches, which is 0.53 inch above the average. This moisture has been sufficient to soak up cloddy plowing and to wet seedbeds on prepared ground to a depth of about 10 inches.

The last three days have been bright and windy, making the fields dry enough for farming operations and considerable progress has been made As all seedbeds for small grains were prepared in March, there remained only a final harrowing to kill new weeds before planting could be started. Seeding was begun on the afternoon of the 19th and is progressing today.

Fall grains and perennial crops have improved greatly since the precipitation was received. Weeds have also sprung up thickly on every hand. Crested wheatgrass has made an excellent growth on most plantings. In one field where experiments in regrassing "abandoned land" have been in progress for the last 4 years a flock of 300 ewes with lambs are pasturing the grass.

Station visitors have included Director Clyde McKee and Ralph Mercer of the Montana Experiment Station and Mr. Fred Mason of the Mandan Station.

Maximum temperature, 81°; minimum, 1°; precipitation, 1.69 inches.

SHERIDAN:

Following unseasonable warmth over the end of the week, rain and snow over the 15th and 16th again delayed tillage operations over the most of the week. Oats were sown in the rotations and wheat in the rotation check plots the 19th, although much of the land was still rather wet for work. Preparation for seeding spring grain varieties is being completed today. Work over the week consisted mainly of hauling shale to fill in the floor of the machine shed and to resurface some other places around the buildings. Fruit stock replacements received from the Cheyenne station were planted.

Early seedings of spring grain outside the rotations emerged during the week. Winter wheat continues to make slow progress. Grass generally has made considerable growth.

Maximum temperature, 75°; minimum, 19°; precipitation 1.77 inches.

DICKINSON:

Moderate temperatures prevailed and there was little precipitation. Field work was continued throughout the week.

Wheat was seeded on the main field rotations on April 17 and completed on the Normal School field on the 19th, about five days later than average. Oats, barley, field peas, crested wheatgrass, and sweetclover were also seeded. The seedbeds generally contained enough soil moisture in the surface soil to insure prompt germination of the seed, except on the fall-plowed plots. Unless showers come within the next few days, crops seeded on fall-plowed land probably will be slow in emerging.

Winter rye seeded in stubble on the rotation plots has come through with fair stands; a part of the plants having emerged this spring. Winter wheat stands are still uncertain; only a thin stand emerged in the fall. Some of the seed is still dry and can not germinate until after a good shower. It is probable that most of the plots will yet be reseeded to spring wheat. Crested wheatgrass made rapid growth during the week and would now provide considerable feed.

Maximum temperature, 72°; minimum, 20°; precipitation, 0.05 inch.

MANDAN:

Arboriculture: The planting of tree seed was completed the first half of the week. Cedar beds which were planted last fall have been mulched with leaves to prevent crusting of the soil until emergence has taken place. A good percentage of these seeds appears to have germinated and should emerge shortly if the soil surface conditions can be kept in favorable condition. Preparations are now under way for the shipping of nursery stock to cooperators, which it is expected will commence early next week.

Horticulture: Planting of the nursery and fruit trees in the breeding blocks has been under way during the week. A large number of crossed apple trees are on hand for planting. While the top ground was in good condition for planting seed and nursery stock, it is dry underneath and rain is needed. Straw mulch has been removed from young trees.

Routine work in the greenhouse, such as potting and transplanting of vegetable and flower plants, was carried on during the week. Mulch and protective coverings from bulbs and perennials were removed. Owing to the long fall and mild temperatures during the winter, the survival and stand of perennials and bulbs was found to be very good. Lawns are greening up slowly. As usual, the crested wheatgrass lawns are green way ahead of other species.

Agronomy: The activities in agronomy for the week have been mainly the preparation of plots for small grain seeding. Most of this preparation consisted of plowing, duckfooting, and harrowing. Plots in the main and south fields were lined and staked, and wheat was seeded on the 19th. The seedbed condition was better than the average for the past several years. Soil samples for moisture determination were taken in the MC - wheat series. Spring plowed ground was moist 1½ feet down, fall plowing 1 foot, and fallow 5 to 6 feet down.

Maximum temperature, 71°; minimum, 25°; precipitation, trace.

ARCHER:

On the whole the weather during the week ending April 20 was cold and wet. The warm spell was terminated by a hail storm on Monday, April 15. This was followed by a wet snow which continued to fall through Tuesday, April 16. The total precipitation, measured without the wind shield, was 0.67 inch, while the total measured with the wind shield was 0.78 inch.

The wet weather delayed field operations until April 20, when seeding was resumed. The seeding of oats and flax will be finished on this date. Spring wheat seeded in the dairy field has emerged with a good stand.

Robert Lang, Range Specialist at the University of Wyoming, visited the station April 18.

Maximum temperature, 76°; minimum, 20°; precipitation, 0.67 inch.

NORTH PLATTE:

A light snow and rain on Monday and Tuesday added some additional moisture to the surface soil. The weather for the rest of the week was fair and warm. Very little damage was done to the winter wheat, spring wheat, and barley when the temperature reached 12° on April 12, but it was a question for a few days whether the oats should be reseeded. The past few days have brought out enough of the oats so there will be a fair stand. There have been several fields of oats reseeded throughout the State as a result of the damage done by this freeze.

During the week, the ends of the plots were trimmed and the roadways weeded. Several stubble plots to be planted to corn or summer tilled were worked to remove the volunteer growth.

Fair stands of bromegrass on the sod plots were obtained from fall seeding. Considerable bromegrass and some crested wheatgrass were killed out in old stands, probably mostly due to last year's drought.

Maximum temperature, 79°; minimum, 26°; precipitation, 0.27 inch.

AKRON: (Period April 1-20)

Small grain plots in the rotations were sown the first three days of the month and are now emerged to satisfactory stands. Jay Curtis came down the 13th to aid with planting the first date seeding of corn and to make the first planting of Dr. Leonard's corn seed treatment experiment.

Winter wheat that emerged last fall still appears doubtful, but the stands are improving every day. That which did not emerge last fall is now appearing slowly. It now looks like the worst preparations and the poorest seeding dates have the best prospects for some sort of a yield. Winter barley in the nursery that emerged nicely last fall is practically all dead. The nursery generally looks bad but in better prospective position than most of the winter wheat seeded on fallow about the station.

K. S. Quisenberry and O. J. Webster visited during the period. Numerous farmers have called about various questions. A large acreage of barley has been planted in the neighborhood of the station this year. Prospects are there will be a much larger acreage in sorghums compared to corn this year.

Maximum temperature, 85°; minimum, 7°; precipitation, 0.87 inch.

COLBY:

The weather was unsettled most of the week. Pleasant summer-like weather alternated with blustery winter weather. Freezing temperatures were recorded on two nights following an inch of snow which fell on the night of the 16th. No additional damage resulted from the freezes this week, but the wheat and barley are not fully recovered from the heavy freeze last week. None of the wheat seems to be killed, but the barley was thinned in places.

The wheat which came up last fall and survived the winter is making rapid growth. Most of it is about 6 inches high. Most fields have thin and bare spots in them. The wheat which came up this spring has made very little progress and is not at all promising. The freezes did not kill the weeds that were up, so unless something happens to them later they will be a great handicap to the wheat. The spring small grains are making fair growth despite the setback by the freezing temperatures. Winter wheat drilled this spring is looking much better than that drilled last fall which came up this spring.

Maximum temperature, 87°; minimum, 27°; precipitation, 0.44 inch; snow, 1 inch.

HAYS:

The past week started with a hot and quiet Sunday. During the night a very heavy wind carrying a lot of dust suddenly struck from the northwest. It continued heavy until the early morning of the 15th, after which it calmed for the remainder of the day. A considerable quantity of dust brought in by the wind remained in the air all day. Tuesday morning a light northeast wind gradually grew stronger until by 1 o'clock it was moving surface soil from many fields in this and adjoining counties. This wind storm continued into the night. Before the wind abated a light electrical storm accompanied by a 0.70 inch rain occurred. Since then the weather has been quiet, partly cloudy, and mild.

The condition of the winter wheat has improved very little. The stand is extremely thin, it is making very slow growth, and weeds are numerous. The late freeze did not kill them. Oats, spring wheat, and peas are making normal growth and look promising. Barley, which was up to a good stand, appears to have been damaged considerably by the freeze. Just how much damage was done is still unknown. There is some fear that perhaps 20 to 25 per cent of the plants may be seriously injured.

A trip made Tuesday during the storm, 30 miles south on highway No. 1, revealed the fact that one-half of the fields were suffering more or less from soil drifting. One-third of the fields had been either listed or cultivated by some means, and in several fields tractors that could not be seen for the dust were hard at work. The farmers were working desperately to save the fields. Most of these fields had been strip-tilled so closely that half of the surface had been covered and a few had been crossed-stripped.

Although memory is not to be relied upon, it seems to us that there were more fields drifting across the highway at this time between Hays and Rush Center than there were during the worst period in 1935.

The 0.70 inch of rain fell slowly enough that there was no run-off. However, it was driven so hard by the northeast wind that it did not moisten the south side of lister ridges. As a matter of fact it smoothed the north sides and tops of the lister ridges and the surface of all level tilled ground so thoroughly that it is now in a bad "blow" condition and will need tillage to prevent blowing unless rains fall at frequent intervals.

Maximum temperature, 90°; minimum, 31°; precipitation, 0.70 inch; Heavy frost occurred on the morning of the 18th.

GARDEN CITY:

Precipitation for the week came in the form of snow and rain which amounted to 0.38 inch. Heavier rains occurred farther west. Minimum temperatures dropped to 32° and 28° on two nights. There was dust in the air on three days, one of which was termed "bad" and was partly due to local blowing.

The barley recovered from the freeze it received on the night of the 11th. That at the north end of the station was injured slightly by dust blowing across it from fields adjoining the station, but at present it is making rapid growth.

Field work consisted of sodding some of the roadways up and down the slope on the Basin Lister project with buffalo grass.

Grasshoppers are commencing to hatch, but indications at present are that the numbers this year will not be so great as last year, unless there is an invasion from other areas.

Station visitors were H. D. Hollembeak, Kansas State College, and J. B. Tuck and Don Scharf, Bureau of Entomology, in grasshopper control work for this area.

Maximum temperature, 88°; minimum, 28°; precipitation, 0.38 inch.

TUCUMCARI:

Following a minimum temperature of 23° on April 12 which killed peaches, plums, and many pears, a minimum of 27° on the 18th apparently killed many apple and cherry blooms. It now appears a small crop of pears, apples, and cherries may be produced.

All row-crop fields in the vicinity have been blank listed and are in excellent condition to receive rain. Precipitation to date this year is normal, with cropped land showing fair moisture to a depth of about 2 feet. Wheat south toward Clovis has been seriously damaged by worms and red spider, although something of a crop is still anticipated.

Station work included overhauling a windmill, completion of increase listing and field cultivating, and poisoning rodents.

Maximum temperature, 86°; minimum, 27°; precipitation, 0.08 inch.

DALHART: (Period April 1-20)

Rather less than the usual expectancy of soil blowing has occurred for the first 20 days of April. There have been at least 5 days during which the soil blowing has been distressing. On the 1st and 2nd of the month soil movement was severe; it was severe on the 10th and 16th but only for a few hours. On each of these two latter days large dust clouds came in which were so characteristic of the famous black blizzard of 1935. Other blowing has been confined to a lesser amount or for periods of short duration.

Early in the month the replacement tree material was planted. This material has been rewatered. It has been necessary to recultivate to check blowing of soil on the station. So far there has been no erosion on the station this spring. Short trips to the adjacent territory show that there has been much more listing to prevent soil movement than in former years. This is probably caused by the compliance provision of the AAA program. Soil works up in good tilth now. No seedbed tillage other than the required preliminary early tillage has been done.

Cherry trees are just now starting to bloom. Other fruit which bloomed earlier -- apricots, peaches, and plums -- were killed by a low temperature of 17° on April 12.

There are a few fields of wheat in the territory around Dumas. There is less wheat in that territory than last spring. Oats and barley on the station were just getting emerged when they were severely punished by moving sand. These plots have since been strip cultivated and could still make a fair stand although no crop is anticipated.

Maximum temperature, 85°; minimum, 17°; precipitation, 0.50 inch.

BIG SPRING:

Weather conditions presented a varied picture during the week. Temperatures dropped from a maximum of 92° to a minimum of 36° in a very short time. Wind velocity ranged from very calm to soil moving proportions although the latter occurred only on one day.

Although the wheat plots have made considerable growth during the past month, they are now showing results of a lack of sufficient soil moisture. As a result of the dry weather last fall, very little winter wheat was planted in this area, and that has furnished little or no grazing.

Plowing and listing of plots in the D.L.A. project was completed during the week. Other work consisted of sand furrowing and knifing increase fields.

Maximum temperature, 92°; minimum, 36°; precipitation, 0.

LAWTON: (Period April 1-20)

The extended winter and spring drought was relieved by 2.03 inches of precipitation April 4 to 6, 0.63 inch on the 10th, and 0.62 inch on the 16th, bringing the total for the month to date up to 3.28 inches. The first rain of 2.03 inches fell very gently with almost no run-off, but the two rains of 0.63 and 0.62 inch fell very rapidly. The latter rain fell within about 15 minutes and afforded a limited supply of stock water.

Small grains, native grasses, and legumes have made a good growth response to the improved moisture conditions. Early Blackhull wheat is showing the first heads on a few fields in the county. On the station this variety is not so far advanced. However, 3 selections of Coker oats, planted October 12, were recorded as first headed April 12 to 16. As yet there is no evidence of leaf rust in the small grains.

Growth of wheat in the wheat-weather project averages from 8½ to 10½ inches in height on the early seedings and 7½ to 9 inches on the late seedings.

Official estimates of the Oklahoma wheat crop place the State yield at 5 bushels per seeded acre. The acreage abandoned is large, and yields will be very spotted on the harvested acreage. Present indications are that the station crop will be better than in 1939.

Corn planted in the rotation plots March 29 emerged slowly to only a partial stand, and the emerged plants were frozen back to the surface by a temperature of 28° on April 11. The final stand was so poor that replanting was necessary.

The kafir, sorgo, and feterita plots were planted April 15, and the dashing rain of 0.62 inch on the 16th provides difficult emergence.

Cool temperatures have prevailed during the month to date, and there have been several days of high wind velocity. Humidity previous to the rains was extremely low.

WOODWARD:

Light rains totaling 0.28 inch and variable temperatures typified the weekly weather. A maximum of 87° on Tuesday afternoon was followed by snow in the Panhandle country Wednesday, a trace occurring here.

Winter wheat made its first really vigorous growth of the season. Prior to last week spring grains were ahead. There is as yet no evidence of jointing except in very early varieties and rye. The wheat crop in general appears to be from 3 to 5 weeks later than normal. Corn plots in the D.L.A. project were prepared and planted. Soil moisture samples from the regular group of winter wheat rotations were taken. Alfalfa recently seeded in border triangle areas, south of the old field, emerged with very good stands. A diversion terrace and road on the S.C.S. farm are nearing completion, and considerable one way disking was also accomplished on this tract.

The recent low temperature of 22° apparently did more damage to fruit than first anticipated. All fruit on the peaches and apricots was killed. There were a few plums left on some varieties, but damage to cherries and apples, which were just beginning to bloom, was rather severe. Iris, which had started to bloom rather profusely, has been entirely stopped for over a week. The April 1 planting of tomatoes, which was severely injured even under protective covering, has been replaced and the middle of April planting was made on the 15th. The second planting of early vegetables and the initial planting of medium early and later vegetables were also made. A number of vegetables and late planted tomatoes have been potted in the greenhouse. Grapes in the grafting experiment are now being grafted.

Lining-out of deciduous and coniferous trees and shrubs in nursery rows was continued, and roadside plantings of conifers and shrubs was completed. Campus plantings and clean up work also is in progress. Transplanting of rooted cuttings and making of greenwood cuttings in the greenhouse was accomplished on rainy days.

Grass seedings recently completed include a number of native and introduced species drilled and broadcast at three rates of seeding on several different methods of land preparation. Routine dates of seeding with a standard mixture have been continued at 10-day intervals in Sudan grass, kafir, sorgo, broomcorn, and proso millet stubble cover. Early plantings retarded by crusted soil following a torrential rain were benefited by recent showers and are now emerging. Eragrostis curvula survived the winter quite well under irrigation, but stands were somewhat depleted on dry land. Selections for cold resistance will be made where warrented. Maurice L. Peterson, Junior Agronomist, graduate of Nebraska University and Kansas State, reported for duty to assist with grass breeding work at this Station.

Station visitors included H. E. Tower, Field Crops Section, S.C.S., Washington, D. C., and E. A. Hodson, Agronomy Division, S.C.S., Fort Worth, Texas.

Maximum temperature, 89°; minimum, 35°; precipitation, 0.28 inch.

BELLE FOURCHE:

The weather turned unusually cold early in the week, but moderate temperatures prevailed during the last 3 days. Crop prospects were further improved by 0.56 inch precipitation received as rain and snow on April 15 and 16. The moisture assured good germination of cereal grains seeded a few days later, and germination of shallow seeded crops was

favored by a heavy shower on April 20. Strong winds rapidly dried the surface soil and caused some soil blowing April 19 and 20 on bare, unworked fields.

Crops made a pronounced growth during two days of warm weather preceding the snowstorm, but subsequent progress was retarded by low temperatures. Crested wheatgrass advanced rapidly, and alfalfa resumed growth. Winter grain continues to improve slowly, and fair stands have developed on all plots. Fall-seeded grass is coming up, and alfalfa and sweetclover seeded April 6 are beginning to emerge.

Field work was resumed April 18, after having been delayed 3 days by wet weather. Duckfooting, harrowing, and staking of rotation plots were completed; and spring wheat, oats, barley, flax, field peas, sweetclover, and grass were seeded.

Maximum temperature, 76°; minimum, 32°; precipitation, 0.86 inch.

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APR 27 1940

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REPORT FOR THE WEEK ENDING APRIL 27, 1940.

HAVRE:

Rain occurred on every day during the week accompanied by temperatures averaging 3.2° below the station normal. Snow fell on Wednesday but was melted within a short time. Light showers of hail were reported locally but were not observed at the Station.

Field work has been hindered by wet ground. Vegetation made very little progress because of cool temperatures and lack of sunshine. Prairie and other grasses have a good start and will make rapid growth with a few warm days.

Grain was treated for seeding on the general farm fields. The first irrigation of the alfalfa fields was completed.

The individually fed lots of heifer calves and yearlings were closed, weights, body measurements, and body scores being taken. Calving is progressing satisfactorily, 73 having been dropped to date. The two-year-olds have been turned out on pasture, but yearlings are being fed in a pasture adjacent to the buildings. Cows are also being fed odds and ends of hay.

Visitors included Director Clyde McKee, F. M. Harrington, O. W. Monson, R. T. Clark, Ralph McCall, and J. J. Sturm, all of Montana Experiment Station; L. A. Clark of the Forage Crop Division, who made a planting of grasses; R. D. Mercer of the Montana Extension Service, and R. L. Shotwell of the Entomological Laboratory, Denver, Colo.

Maximum temperature, 60°; minimum, 31°; precipitation, 1.08 inches.

JUDITH BASIN:

Intermittent precipitation during the week again delayed field work. The week was rather cold and there was considerable wind.

On the first three days of the week the steers for the seventh summer grazing experiment were weighed and grouped. Two lots of 12 steers each were placed on crested wheatgrass pastures which are in fine condition. This grass is making a luxurious growth.

The summer pastures, of 23.6 acres each, will be stocked as follows:

Native grass	4 animals
Bromegrass	8 animals
Crested wheatgrass	12 animals
Crested wheatgrass (rotation)	12 animals

There are reports throughout the area that weeds are getting ahead of the winter wheat due to the continued cold wet weather.

Maximum temperature, 57°; minimum, 26°; precipitation, 0.58 inch.

HUNTLEY:

Sprinkles of rain occurred almost daily throughout the week, but at no time was the precipitation heavy enough to stop field work for more than a few hours. Precipitation for the month now amounts to 174% of average and insures plenty of soil moisture for germination and emergence of spring-sown small grains. Some early plantings in the neighborhood are up with good stands.

Seeding of small grains in the plots and miscellaneous plantings has progressed between showers and is now practically completed on the

dryland fields. Other field work consisted of giving alfalfa plantings a second cultivation with the springtooth harrow to reduce weed growth which has sprung up abundantly as a result of continued surface moisture. Alfalfa, on the other hand, has started slowly because of cool weather and small supply of subsoil moisture until recently. Crested wheatgrass continues to make a vigorous growth with a large number of volunteer seedlings showing up.

A recent drive of about 150 miles through nearby rangelands revealed stock water again available and an abundance of new and old grass over much of the region.

Maximum temperature, 62°; minimum, 34°; precipitation, 0.33 inch.

SHERIDAN:

Tillage operations were possible continuously over the past week after noon of the 23rd. Oats in the rotations, the varieties of spring grain, and miscellaneous seedings of alfalfa and crested wheatgrass finally were sown. Manuring of rotation plots for corn and sorgo was completed. Clearing fields of Russian thistles, where not previously cleared, is now in progress.

Grass, alfalfa, and winter wheat made good progress over the week. A better stand of winter wheat is now apparent on continuously cropped plots than appeared likely a week ago. The crop winterkilled badly however in the corn rows where stubbled in after corn. Volunteer grain, both fall and spring, is bad on most fall plowing, or where stubbled in last fall or very early this spring on land growing grain last year, and probably will make the stand too thick in many spots to sustain a normal growth. Spring wheat and barley in the rotations, and the earliest spring seedings of grass and alfalfa, emerged.

Lambing finally was completed, with the poorest lamb crop since sheep were brought to the station. Only 62 percent of the ewes 2 years old or older dropped lambs, although there was a 145 percent crop from those ewes, but less than 100 percent from the total number of ewes kept over.

Maximum temperature, 73°; minimum, 35°; precipitation, 0.49 inch.

DICKINSON:

A slow, steady rain on April 20-21 amounted to 2.39 inches at the station and 2.88 inches at the airport, 6 miles south. Cool, cloudy, foggy or drizzly weather persisted nearly all week, so conditions were ideal for the water to go into the soil. This heavy rain was general over most of southwestern North Dakota with the greatest amount reported in this district. More rain fell in 30 hours in this storm than had fallen in the preceding 8 months.

Precipitation of 3.32 inches to date in April is the heaviest reported for the month since 1892, the year records were started at Dickinson.

An increase block of Steigum barley was seeded on corn ground. This was the only seeding possible as fallowed ground remained too wet. Plowing of the crested wheatgrass block seeded in 1923 was completed after the big rain. Although the soil was thoroughly wet, much power was required to turn the dense sod. Plowing of this patch was started in August but was abandoned because the soil was so dry.

Seeding of small grains in the district has been only about half completed. All vegetation continues to be backward because of the cool weather and lack of sunshine.

Maximum temperature, 69° minimum, 26° precipitation, 2.70 inches.

MANDAN:

Arboriculture: Shipping of tree stock to shelterbelt cooperators has been carried on all the week, and will be completed today - Saturday. All stock came through the winter in good condition, except for the burning of evergreens, and good stands should be obtained if weather conditions are favorable. A few letters from cooperators in scattered locations indicate that from 2 to 3 inches of precipitation have been received during the past month in their respective territories. These are the most encouraging reports received at this time of year, of the past several years.

Horticulture: Weather conditions were favorable for tree planting during the week. Only about a day's planting remains to be done. Part of the raspberries have been uncovered. Fruit trees were shipped to cooperators on April 27. The first seeding in the acre garden was done the early part of the week. Final transplanting of late planted vegetables was finished during the week. Renovating and cultivation of perennial flower borders were started during the week. Tulips and hardy chrysanthemums have survived well and are making a good growth. Lawns are slowly greening up. Crested wheatgrass, especially the Fairway strain, is showing up very good this year. Very little winter injury is as yet apparent in shrubbery, and tree groups about the grounds and buds are slowly swelling.

Agronomy: The week was cool and cloudy with two days of high wind. Oats were seeded on the rotations on the 23rd, or 3 days later than average. Some small blocks have been plowed. Field terraces in field P have been disked for oats.

Crested wheatgrass has made a good start and would be fit for pasture at present. Native vegetation was slow in starting growth. The prairie appears green in spots. Wheat seeded in the rotations on the 19th is just nicely germinated. A slow rain fell on the 21st.

Maximum, 70°; minimum, 26°; precipitation, 0.48 inch.

BELLE FOURCHE:

Cool, cloudy, windy weather prevailed most of the week, and frequent small amounts of precipitation checked drying of the soil. The heaviest rain in over two years commenced Saturday evening and continued until about noon the following day. The total precipitation was 1.38 inches. Hail was received at the beginning of the storm, but it was of only a few minutes duration and did no damage. Considerable run-off occurred but the loss in this respect was not excessive on plowed or cultivated fields. The rain materially improved crop prospects and range conditions. Range lands north of Newell are reported to be wet to a depth of over two feet.

Crops made very little progress during the week, owing to the continued cold, cloudy weather. Stands of winter grain, early seeded alfalfa and sweetclover, and fall-seeded grass improved somewhat, but emergence of germinated alfalfa, sweetclover, and grass seed is far from being completed.

Maximum temperature, 76°; minimum, 29°; precipitation, 1.39 inches.

ARCHER:

The weather during the week was rather cool and threatening with heavy fog during the last three mornings. Only traces of precipitation occurred.

Plant growth has been rather backward. Some of the buds of the earlier trees and shrubs are beginning to open. The Chinese apricots are in bloom. Wheat in the rotation plots is up, and barley and peas are emerging.

Ewes with lambs were turned into a crested wheatgrass pasture April 26. Lambing is approaching completion.

Station work consisted of oneweying the land in the dairy field which is to be seeded to corn, seeding cereals for a forage production experiment, and planting trees.

Director W. L. Quayle of the University of Wyoming visited the station April 25.

Maximum temperature, 70°; minimum, 28°; precipitation, trace.

NORTH PLATTE:

Intermittent showers fell Sunday night and Monday. The weather for the remainder of the week was cool, windy, or foggy. A heavy dust storm blew in from the south on Saturday evening and visibility was reduced to less than a quarter of a mile. A thunderstorm followed, and during the night 0.36 inch of moisture fell. This was the most precipitation recorded for any 24-hour period so far this month. To date 0.97 inch of precipitation has been recorded for April. This is over an inch less than the average for the month.

The pastures are slow in starting this spring and have made less spring growth than in any of the past few years.

The plots to be spring plowed for corn and sorghum were plowed and packed during the week. All roadways and some alleys between the winter wheat plots were weeded.

Maximum temperature, 72°; minimum, 34°; precipitation, 0.61 inch.

AKRON:

Weather was very unsettled during the week, but very little precipitation resulted. Hard northwest wind Monday had the air hazy all day. This severely tested the anchorage of some of the emerged spring grain fields. East wind toward the end of the week brought a fog that persisted through Friday afternoon and night. A drizzling rain started about noon which promised to produce a measurable amount by the next morning.

Spring culture of the rotation plots to be planted to corn and sorghums was completed early in the week. The instrument shelter was moved to a spot in the pasture south of the barn. Pines planted in 1926 along the western side of the building site had become so large as possibly to interfere with accurate recording of winds and snow from the northeast in the old location. Anchorage to some of the instruments necessitated attention, so it was not much additional chore also to move the enclosing fence. Accumulated tumble weeds were burned. Spring grains are making suitable progress. Winter wheat still struggling.

Maximum temperature, 80°; minimum, 23°; precipitation, 0.12 inch.

COLBY:

The weather was very unsettled. It was cloudy and cool most of the time. From Friday morning until almost noon Saturday it was cloudy and misty with a rather heavy fog most of the time. High winds with considerable dust and much soil blowing prevailed on four days, and precipitation was recorded on five days. It was the worst week of the year for soil blowing. Some fields of barley and late wheat blew out. The station

fields have been gone over with a duckfoot so that no soil blowing took place.

The spring small grains are making fairly good growth. The barley that was badly nipped by the freezes seems to be recovering fairly well. The wheat which came up last fall and survived is looking very promising and growing rapidly. The wheat which came up this spring is also beginning to grow, but is generally thin, and some of the fields are getting weedy. The best stands are where the ground was so hard that the drills barely penetrated the surface. Most stubble fields have almost no volunteer wheat; but some have good stands. Pale western cutworms are numerous in stubble fields and are present in most fallow fields. They are still small but have destroyed several fields of wheat and barley. They are handicapped somewhat this year in that the surface is rather hard on most fields.

The plowing for the row crops was done Thursday, and the first tillage was done for fallow. The ground was fairly wet and turned up mellow to shiny. There were almost no weeds, except where thistles were present over winter. Under these thistles weeds were thick, some thistles but mostly tansy-leaf mustard. It seems as though the thistles furnished a peculiar protection. On stubble plots where the thistles were removed last fall there were almost no weeds.

Maximum temperature, 80°; minimum, 36°; precipitation, 0.08 inch.

HAYS:

The temperature was mild and spring-like. The sky was clouded considerable of the time, but only three traces of rain occurred. Three days were quite dusty. Some cultivation was necessary in local fields to prevent soil drifting.

The spring-germinated winter wheat is just now beginning to make some growth, the best of which is 3 inches high. It is tillering very little. Except for the fact that the wheat is making a little more rapid growth now than previously reported, the prospects have not improved for the reason that the stand is very thin and the weeds are very thick.

The freeze previously reported now seems to have killed only a small percentage of the barley. That portion not killed has recovered and is now making a good growth. The oats and spring wheat are also making a good growth. All three of these crops look promising.

Pastures are green. The deciduous trees along the stream are about half out in leaf. Apple and cherry trees are in full bloom.

The Annual Judging Contest in which 1,032 boys and girls participated took place Friday the 26th. There are 750 visitors attending the Annual Feeders' Day Program today.

Maximum temperature, 77°; minimum, 33°; precipitation, trace.

GARDEN CITY:

Only a trace of moisture fell this week. The total thus far this month is 0.80 inch. The average for the entire month is 1.61 inches. Wind velocities were rather high for all but one 24-hour period, being above 12 M.P.H.; the highest was 21.1. On five days there was dust in the air, and on two of these days the storms were termed "bad". Some of the dust came from fields adjoining the station and some from considerable distance.

The barley is making good growth, although some at the north end of the station has been injured slightly by dust.

Maximum temperature, 80°; minimum, 38°; precipitation, trace.

TUCUMCARI:

Weather has been relatively warm and calm, with rain threatening several days but none occurring. Precipitation this month to date is one-half normal for April, thus the year to date is some half-inch below normal.

Work consisted of seeding grasses, repairing windmill, cleaning lawns and hedges, and completion of orchard pruning.

Wheat on the plains south is being severely damaged by cut worms, spiders, and drought. Crop prospects have been reduced 50 percent the past 10 days.

Visitors included Messrs. Bell, Savage, and Smith of the Woodward Station; Powers of the Vega, Texas, Station; and Marshall and party, S.C.S., Albuquerque.

Maximum temperature, 87°; minimum, 39°; wind movement, 6.1 miles per hour.

DALHART:

Weather conditions have been both good and terrible during the past week. Most of the time during the middle of the week the weather conditions were ideally pleasant. The wind came with high velocities and considerable soil on Monday and part of the day Tuesday. This afternoon (Saturday) the wind is at a high velocity, and it is transporting the highest density of soil particles for the year.

Advantage was taken of the high velocity on Monday and Tuesday to harrow the station pasture. The weed cover was fairly well dissipated and hopes are still high that the accumulations may be levelled somewhat during the ensuing 2 or 3 weeks.

Barley and oats continue to be alive although the plants are still small. The sour cherries are now just past the full bloom stage.

This spring has furnished a rather low number of days with high sustained wind velocities. The chief difference between this spring and the immediate 3 preceding years is the higher percentage of good days which have occurred.

Maximum temperature, 85°; minimum, 38°; precipitation, none.

BIG SPRING:

Rains threatened on several days during the past week, but never developed into anything more than dusters. Temperatures ranged from a maximum of 99° to cold northers, and wind velocity was high enough to keep dust in the air parts of each day.

The wheat plots are showing the effects of a shortage of soil moisture. In the C. C. series all plots, with the exception of wheat on fallow, appear to be beyond recovery.

Station work has consisted of knifing lister beds in increase fields and in plots, cultivating trees and shrubs, and hoeing weeds.

Maximum temperature, 99°; minimum, 48°; precipitation, 0.

LAWTON:

Strong south winds prevailed the past week with some cloudiness, terminating the week with a daylight wind velocity of 16.3 miles per hour on the 28th. The surface soil is drying rapidly, and small grains which have made rather rapid growth during the past two weeks could use additional moisture to good advantage. Early Blackhull wheat and all varieties of fall-seeded oats and barley are heading. Early spring-seeded

oats also showed the first heads at the end of the week. Oats and barley are heading quite short, and it appears that this stage of development will be quite uneven. Several varieties of wheat will break out of the boot within a few days.

In the southeastern part of the county where Early Blackhull wheat is grown extensively, present prospects indicate that yields of 5 to 10 bushels per acre may be expected. Most of these fields are heading and a few are nearly fully headed. Throughout the remainder of the county yields that will pay the harvest bill seem questionable.

All sorghums to be grown in plots in the chinch bug sorghum resistance project were planted April 23 and 24. Surface moisture conditions were good enough to warrant satisfactory germination and emergence. Corn in the rotation plots was replanted April 22.

PENDLETON:

Precipitation for the last five months has been above normal, and crop prospects are very good. The season is about 10 days in advance of normal, as indicated by the heading of some of the native blue grasses. The winter wheat on the station is about a foot high, has a fine color, and has tillered rather heavily. All spring crops except corn are emerged. It may be necessary to reseed mustard, as the ground crusted over so hard it is having trouble getting through. Alfalfa seeded the same day and same way as the mustard has emerged with good stands.